

KEEPING MATHS EDUCATION PROFESSIONALS IN TOUCH

Registered Charity 517028

Do you know which maths activities we can offer?

Contact us

Tel:
0151 794 4066/4050

Web:
www.maths.liv.ac.uk/~mem

Email:
orbitereditor@merseymail.com

Post:
MEM, Department of
Mathematical Sciences,
University of Liverpool,
Peach Street,
Liverpool, L69 7ZL

MEM President:

Dr Ian R Porteous

MEM Chairman:

Mr Barry Grantham

MEM Secretary:

Mr Benjamin Margetts

LMS President:

Dr Colin Wright

LMS Secretary:

Mr Phil Bamber

Quick Calendar



May:

Tues 23rd
Senior Challenge Prize Giving

June:

Tues 6th
Challenge Prize Giving

With the school year moving into the summer term many pupils are now anxiously preparing for examinations. In this issue we are already celebrating the success of pupils in the Challenge and Senior Challenge Competitions.

MEM Masterclasses 2006

- masterclasses go from strength to strength

A new series of Masterclasses will take place during the Autumn Term. Numbers will be limited to about 70, with at most two pupils representing each school.

The Masterclasses will take place on five alternate Saturdays, 9.45 - 2.30pm, at Liverpool Hope University (Woolton Road) or The University of Liverpool. The first being Saturday 7th October at the University of Liverpool.

They will take the form of talks, problem sessions, workshops and hands-on computer experience. The sessions are aimed at pupils with an enthusiasm for mathematics. There will be no charge to participants. Light refreshments are served during the sessions, but we ask everyone to bring a packed lunch.

If you wish to nominate two pupils from your school who are at present in Y7 or Y8 then **please use the reply slip on Page 3**. You should consult the pupils concerned to make sure that they are willing, if chosen, to attend all five Saturdays during the Autumn term. Places are strictly limited to two from each school, we try to keep an even balance between boys and girls.

Some places on the Masterclasses will be reserved for Challenge prize winners who wish to take part; feel free to nominate prizewinners or others from your school as you wish.

We shall write to all schools which have applied for places, notifying them of our decisions, by **Friday 14th July**.

For further details please contact Ian Porteous at the usual MEM address or:

porteous@liv.ac.uk

RI Masterclass

- at the University of Liverpool

The Royal Institution of Great Britain has for many years coordinated Masterclasses in Mathematics across the country, and normally in June hosts two special classes in London, one for representatives of classes that have been held in the London area, and the other for classes from further afield. This year, since the RI premises are being refurbished, an out-of-town class is to be held at The University of Liverpool on Friday, 16th June.

It is hoped that there will be spaces for youngsters from our series to attend, though this will have to be limited to those who have attended all five sessions. Invites will go to the children concerned, at their home addresses, within the next two weeks, in the hope that they can get permission from their schools to attend.

MEM is pleased to acknowledge generous financial help received during the past 12 months from:

MERCER

Human Resource Consulting



Alliance
Leicester

The Holt Charitable Trust
W.H.Smith Promotions Ltd
Liverpool Hope University
University of Liverpool

Alliance & Leicester Challenge 2006
- The winners board

Solutions can be found at:
www.maths.liv.ac.uk/~mem/

First Prize

Sarah Burgen John Chawner	The Queen's School, Chester St Nicholas Catholic HS, Hartford
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Second Prizes

Morven Baker Oliver Chen Rebecca Cavanagh Godfrey Chan Kate Fowler Alex Isted Richard Alun Jones Greg Martin Simon Tenwick Rachel Kan	The Grange School, Hartford Lowton Sports College The Blue Coat School, Oldham Terra Nova School, Jodrell Bank Bolton School (Girls' Division) The Grange School, Hartford Birkenhead School St Gregory's RC HS, Warrington Range High School, Formby Birkenhead High School
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Third Prizes and Consolation Prizes are also being awarded.
There were around 1000 entries from around 50 schools.

**Mercer Human Resource Consulting
Senior Challenge 2006**
- The winners board

Solutions can be found at:
www.maths.liv.ac.uk/~mem/

First Prize

James Liu	Merchant Taylors' School, Crosby
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Second Prize (with special commendation)

Iain Carson Laura Carson	St Gregory's RC HS, Warrington The Belvedere School
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Second Prizes

Mirinalini Dey Mark Quigg Lucy Williams Kate Burns Emily Clay	Westholme School, Blackburn Merchant Taylors' School, Crosby Merchant Taylors' School for Girls Merchant Taylors' for Girl Christleton High
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Third Prizes and Consolation Prizes are also being awarded.
There were around 250 entries from around 24 schools.

**Senior Challenge
1980 – 2003**

Senior Challenge
1980 – 2003 on CD
£10 (p&p included).

A full set of questions and answers is now available with original Peter Ackerley Cartoons on CD.

To obtain a copy please send a cheque payable to:

**Mathematical Education
on Merseyside**

for the attention of:
Prof. Peter Giblin
at the usual MEM address
(see front page).

NRICH

- Need more

NRICH is an organisation that looks to get young people involved in enjoying the exploration of mathematical ideas with a view to helping them develop their knowledge and understanding.

The organisation has a huge database of problems available online at varying levels of difficulty:

nrich.maths.org

Roadshow News

Please see the Newsletter attached.

An application form for the Roadshow CD is included on page 6.

Liverpool University Maths Club

- Need more challenging maths?

The club was formed a number of years ago at the request of several pupils who had previously enjoyed MEM masterclasses. The LUMC is ideal for pupils of GCSE standard or above, who are eager to extend their knowledge and take on maths challenges.

We generally meet the last Saturday of each month during term time.

LUMC meets in the Department of Mathematical Sciences at the University of Liverpool, usually for a full morning.

The first session of the new academic year will be:

23rd September 2006

We do not charge anything for pupils to attend.

More details and application forms are available from:

David Lewis
d.m.lewis@liv.ac.uk

www.maths.liv.ac.uk/~mathsclub/

ATM

Anybody interested in local Association of Teachers of Mathematics activities or resources is welcome to contact Sue Humphreys at:

suehumphreys@wirral.gov.uk

Tel: 0151 346 1182

Wirral Professional Development Centre, Acre Lane Education Centre, Bromborough, Wirral, L62 7BZ

Can we get in touch?

Do we have up to date contact details for you? Email, phone, fax, address etc

Keep in touch with all the latest news
Contact us at:
orbitereditor@merseymail.com

Masterclasses 2006 Reply Slip

Please return Dr Ian Porteous as soon as possible:

Department of Mathematical Sciences,
University of Liverpool, Peach Street, Liverpool, L69 7ZL

Alternatively email the information below to: porteous@liv.ac.uk

- A) I wish to nominate the following two pupils for the 2006. I have consulted them and they have expressed an interest and willingness to attend all five sessions. In the Autumn term they will be in Y8 or Y9.

1. Surname _____ First Names _____

Gender Male / Female (Please circle) Year (Autumn 2006) _____

2. Surname _____ First Names _____

Gender Male / Female (Please circle) Year (Autumn 2006) _____

Name of teacher _____ Email _____@_____

Name of school _____

Address of school _____

Post Code _____

Telephone _____ LEA _____

- B) I am willing to help with workshops at the masterclasses:

Name of teacher _____ Email _____@_____

Name of school _____

Address of school _____

Post Code _____

MEMoku

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					4		
5		6			8		7



THE UNIVERSITY
of LIVERPOOL

School of Mathematical Sciences

Outreach Officer (0.6 Fte)

£26,401 - £35,482 pa (pro-rata)

To administer and develop existing schools outreach programmes, the Fun Maths Roadshow of the Liverpool Mathematical Society and the University's Maths Club, taking these activities into schools in the North-West and beyond. Visit <http://www.liv.ac.uk/maths/HOME/schools.html> for some details of current activities.

A degree in mathematics or closely related discipline is preferred, together with some experience of working with school children, both Junior and Secondary. Substantial IT skills (websites, databases, graphics, document production and email) are essential. The post, funded by EPSRC under the Partnerships for Public Engagement scheme, is available for two years.

Quote Ref: B/729/TES

Closing Date: 19 May 2006

For full details, or to request an application pack visit
www.liv.ac.uk/university/jobs.html or email: jobs@liv.ac.uk

Tel 0151 794 2210 (24 hr answerphone),
please quote Ref: in all enquiries

COMMITTED TO DIVERSITY AND EQUALITY OF OPPORTUNITY

30 Years of MEM

Part 3 – The Now and the Next 30 Years

Parts 1 and 2 of this short series appeared in the Orbiters dated September 2005 and January 2006 respectively. They described the beginning of Mathematical Education on Merseyside (MEM) in 1975 and the development of its activities since then.

Cognate groups active locally include the Liverpool Mathematical Society (LMS), the Association of Teachers of Mathematics and the Royal Statistical Society. Further afield the North West Branch of the Institute of Mathematics and its Applications holds meetings in Manchester. Of these groups the MEM has always worked most closely with the LMS.

The LMS was established in 1899. It is an association with individual members who pay subscriptions and elect their officers and committee annually. Details of its activities are circulated with each edition of the Orbiter. From 1929 the LMS has fulfilled the role of the local branch of the national Mathematical Association. In 1999, to celebrate its one-hundredth birthday, the LMS decided to take 100 mathematical activities into 100 schools within the centenary year. This was the start of the now well established LMS FunMaths Roadshow, which has continued to evolve from strength to strength year-on-year.

The 1970's were a period of many challenges both for education in general and for mathematical education in particular. The polytechnics were established. Computing was percolating into secondary education. The Cockcroft Committee inquired into the Teaching of Mathematics in Schools and in 1982 produced its report "Mathematics Counts".

It was in 1975 that MEM was formed primarily to identify the local needs arising from such challenges and to provide a forum for liaison as to how best they might be met. Experiences were shared, potential course developments discussed and unnecessary duplication of effort avoided. One enduring example of an MEM initiative is the termly production of the Orbiter.

In 1978 and 1980 respectively, the "Challenge" and "Senior Challenge" competitions were launched. It soon became evident that obtaining adequate funding from sponsors for pupil-centred activity by MEM, and by LMS, was problematic. This difficulty was eased through MEM seeking charitable status during 1985 and receiving it the following year.

Membership of MEM is presently limited in number to a maximum of 24 with members nominally representative of prescribed stakeholder groups such as staff in the higher education institutions,

serving teachers in the five Merseyside districts, LEA advisers, at least one of the sponsors and so on.

The essential roles of LMS and MEM are distinct and are reflected in the differences in their respective structures.

The 1970's challenges for mathematical education have not gone away. The Smith Committee has recently inquired into the Post-14 Mathematics Education and in 2004 produced its report "Making Mathematics Count".

One of the three key issues of major concern identified in the report was "the lack of resources, infrastructure and a sustained continuing development culture to support and nurture all teachers of mathematics". The recommendations included the establishment of a national infrastructure consisting of a National Centre for the Excellence in Teaching Mathematics together with a network of Regional Mathematics Centres (RMCs).

The report notes (para 1.21) that "there are currently very few forums for effective communication among major stakeholders" in mathematical education. It notes further (para 6.56) "overwhelming endorsement from respondents to the Inquiry of the need to build local communities and networks. These should not just be concerned with CPD delivery, but should also serve to bring together a wide range of stakeholders in support of all aspects of the teaching and learning of mathematics and also wider issues of profile raising, awareness and career advice".

One of the ten (!) clauses within Recommendation 6.14 is that "the RMCs should provide support for local networks within the regional networks, building on existing local networks, including mathematics teacher associations, mathematics specialist schools networks, the Learning and Teaching Support Networks for Mathematics, the regional and local activities of the mathematics professional and learned societies. The Open University and other Higher Education Institutions".

At the time of writing there are forward-looking discussions taking place within our region.

Drawing on its experience over the past 30 years, MEM is well-placed to provide the basis of, or have a major contribution to make to, a Merseyside Local Network within a North West Regional Network.

Here's to the next 30 years.



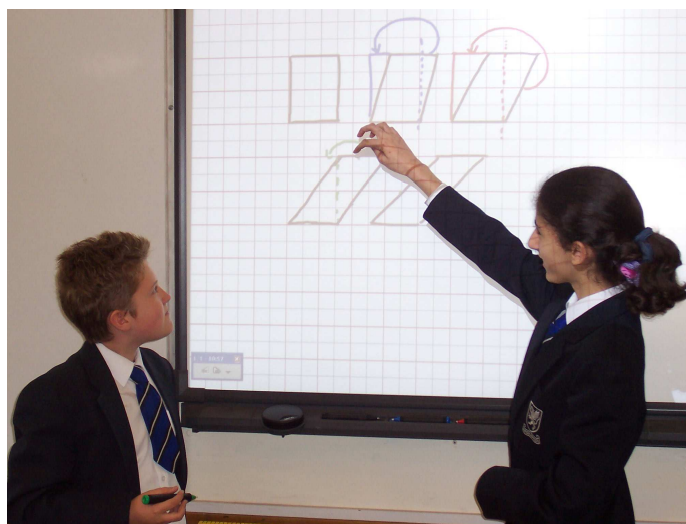
Manchester
Metropolitan
University

Developing Maths in Context:

Making Sense of Mathematics

*Using Realistic Mathematics Education to Improve
Pupil Performance*

*A two day conference
Friday/Saturday 7th/8th July 2006*



Conference fee including food: £100
Special hotel rate also available

Keynote Speakers:

Julia Anghileri, University of Cambridge
Meg Meyer, University of Wisconsin
Martin van Reeuwijk, Freudenthal Institute

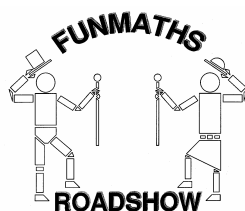
Audience:

Mathematics Teachers, HE tutors, Researchers,
others with interests in Mathematics Education

For more information and booking details follow the link below:

<http://www.ioe.mmu.ac.uk/business/rme/>

or Tel: 0161 247 /2043 / 6425



Liverpool Mathematical Society

FunMaths Roadshow Version 3



Order Form

Please provide the following details where relevant for payments and delivery:

Date of this order	
Your reference no.	
Name	
School/College/other	
Address	
Address	
Town	
Post Code	
County	
Telephone	
Email	
<p>Version 3 of the Roadshow CD consists of 250 activities arranged in 10 'boxes' of 25 activities, with answers, templates and other supporting information. Boxes 1 & 2 are aimed at Upper Primary/Lower Secondary, Boxes 3 & 4 Lower Secondary, Boxes 5 & 6 Mid Secondary, Boxes 7 & 8 Upper Secondary/Lower Sixth, and Boxes 9 and 10 (new in 2005) Lower & Upper Sixth. Included now are Welsh, Scots Gaelic and French versions of Boxes 1 to 8!</p>	
<p>Individual CDs are supplied in a plastic jewel case at £20 each, including post & packing.</p>	<p>Number of CDs at £20 each</p>
<p>Bulk packs of 10 CDs are supplied in paper sleeves, not jewel cases, at £100 per pack, including post & packing.</p>	<p>Number of packs of 10 CDs at £100 per pack</p>
<p>Total value of order:-</p>	

Cheques should be made payable to **Liverpool Mathematical Society**

Orders and payments should be sent to:

**FUNMATHS ROADSHOW, Barry Grantham, Mathematics,
Liverpool Hope University, Hope Park, Liverpool, L16 9JD**

tel: 0151 291 3612 fax: 0151 291 3163 email: granthb@hope.ac.uk

Merseyside Secondary Maths Conference

AT THE VILLAGE HOTEL LIVERPOOL

on Tuesday 11th July 2006

Following a very successful conference in 2005 we are delighted to be able to offer you a unique opportunity to be inspired by experienced and exciting speakers as well as seeing all the latest books, software and other materials available to enhance your teaching.

Programme

9.00 am	Registration and Coffee
9.15 am	Introduction
9.30 am	Workshop - Session 1
11.00 am	Exhibition of Publishers and Educational Suppliers Material
11.30 am	Workshop – Session 2
1.00 pm	Lunch
2.00 pm	Workshop – Session 3
3.30 pm	Plenary
3.45 pm	Close

Workshops

Title and information	Presenter
Thinking Skills in the mathematics classroom	Sue Cronin Maths lecturer, Hope University
Motivating lessons for GCSE maths	Emily Vernon Advanced skills teacher, Anfield CC School, Liverpool
Interactive teaching without a textbook	Mike Ollerton Maths Consultant
Maths Anxiety	Cath Daley Maths Consultant

Cost per delegate is £120.

For further information and/ or a booking form please contact:

Sue Harkness or Andrew Adebayo

Telephone: 0151 233 8122

Fax: **0151 233 8107**

Email: susan.harkness@liverpool.gov.uk
andrew.adebayo@liverpool.gov.uk

Merseyside Secondary Maths Conference: 11th July 2005